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FOREIGN TECHNOLOGY DIVISION

ELECTRICAL INSULATING VARNISH KF-965

EDITED TRANSLATION

FTD-ID(RS)T-1000-79 16 August 1979

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ELECTRICAL INSULATING VARNISH KF-965

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U. S. BOARD ON GEOGRAPHIC NAMES TRANSLITERATION SYSTEM

Block	Italic	Transliteration	Block	Italic	Transliteration
А а	*А а*	A, a	Р р	*Р р*	R, r
Б б	*Б б*	B, b	С с	*С с*	S, s
В в	*В в*	V, v	Т т	*Т т*	T, t
Г г	*Г г*	G, g	У у	*У у*	U, u
Д д	*Д д*	D, d	Ф ф	*Ф ф*	F, f
Е е	*Е е*	Ye, ye; E, e*	Х х	*Х х*	Kh, kh
Ж ж	*Ж ж*	Zh, zh	Ц ц	*Ц ц*	Ts, ts
З з	*З з*	Z, z	Ч ч	*Ч ч*	Ch, ch
И и	*И и*	I, i	Ш ш	*Ш ш*	Sh, sh
Й й	*Й й*	Y, y	Щ щ	*Щ щ*	Shch, shch
К к	*К к*	K, k	Ъ ъ	*Ъ ъ*	"
Л л	*Л л*	L, l	Ы ы	*Ы ы*	Y, y
М м	*М м*	M, m	Ь ь	*Ь ь*	'
Н н	*Н н*	N, n	Э э	*Э э*	E, e
О о	*О о*	O, o	Ю ю	*Ю ю*	Yu, yu
П п	*П п*	P, p	Я я	*Я я*	Ya, ya

*ye initially, after vowels, and after ъ, ь; e elsewhere.
When written as ё in Russian, transliterate as yë or ë.

RUSSIAN AND ENGLISH TRIGONOMETRIC FUNCTIONS

Russian	English	Russian	English	Russian	English
sin	sin	sh	sinh	arc sh	arcsinh
cos	cos	ch	cosh	arc ch	arccosh
tg	tan	th	tanh	arc th	arctanh
ctg	cot	cth	coth	arc cth	arccoth
sec	sec	sch	sech	arc sch	arcsech
cosec	csc	csch	csch	arc csch	arccsch

Russian	English
rot	curl
lg	log

1000

GOST 15030-69

ELECTRICAL INSULATING VARNISH KF-965

By resolution of Committee of Standards, Measures, and Measuring Instruments under the auspices of the Council of Ministers of USSR of 1 October 1969, No. 1085 date of introduction established at 1 July 1970

Nonobservance of this standard punishable by law

The present standard applies to electrical insulating varnish KF-965 (formerly varnish 302), which is a base solution consisting of polymerized oils (mixture of tung or oiticica and linoleic) and calcium resinate in organic solvents with siccatives added.

Varnish KP-965 is intended as a coating over electric steel.

Varnish KP-965 is applied to the surface by means of varnishing machines, immersion, the flow-coat method, spraying, and by brush.

1. TECHNICAL SPECIFICATIONS

1.1. The formula for varnish KP-965 must be confirmed by the Ministry of the Chemical Industry of the USSR and approved by the Ministry of Health USSR and by the All-Union Institute of Electrical Engineering.

1.2. The physicochemical indicators of electrical insulation varnish KP-965 must conform to the requirements and standards indicated in the table.

A Наименования показателей	B Нормы
1. Цвет и внешний вид лака	C Однородная жидкость от светло-до темно-коричневого цвета без механических примесей
2. Внешний вид пленки	D После высыхания лак должен образовывать глянцевую гладкую и однородную пленку
3. Вязкость по вискозиметру ВЗ-4 при 20°С в сек, не менее	90
4. Содержание сухого остатка в %, не менее	65
5. Время высыхания при 200—210°С в *мин*, не более	12
6. Твердость пленки по маятниковому прибору при 20°С в условных единицах, не менее	0.4
7. Маслостойкость пленки в *кое*, не менее	6
8. Электрическая прочность пленки в *кв/мм*, не менее:	
при 18—22°С	70
после действия воды в течение 24 *ч* при 18—22°С	30

Key: A - Name of indicator; B - Standards.

1. Color and external appearance of varnish; C - Homogeneous liquid from light to dark brown color without mechanical impurities.

2. External appearance of film; D - After drying the varnish should form a film which is smooth, glossy, and even.

3. Viscosity according to VZ-4 viscosimeter at 20°C in s, no less

than.

4. Concentration of dry residue in o/o, no less than.

5. Drying time at 200-210°C in min, no more than.

6. Hardness of film measured by pendulum device at 20°C in conditional units, no less than. 7. Oil resistance of the film in kG, no less than.

8. Electrical strength of film in kW/mm, no less than: at 18-22°C; following effect of water for 24 h at 18-22°C.

1.3. When necessary the varnish is diluted by white spirit (GOST 3134-52) or by lamp kerosene (GOST 4753-49).

1.4. In preparing, testing, and using varnish KF-965 strict precautions called for in corresponding instructions on safety engineering must be observed.

1.5. The finished varnish should be accepted by a technical check on the part of the producing enterprise. The producer must guarantee that the varnish meets the requirements of the present standard.

The manufacturer must replace the varnish free of cost within 6 months of the day that it is delivered to the client if within the indicated period the client discovers that the varnish does not conform to the requirements of the present standard. The varnish must be replaced under conditions for the rules on transportation and storage according to GOST 9980-62.

2. TEST METHODS

2.1. The rules for sampling and test methods indicated below must be employed for a control check by the client of varnish quality and the conformity of containers, packing, and marking to the specifications in the present standard.

2.2. In checking a delivered batch of varnish samples are taken for GOST 9980-62.

Here a batch is understood as the amount of varnish produced in a single technological process and accompanied by a single certification of quality.

2.3. Test specimens are prepared according to GOST 13526-68 (part 2.2).

The external appearance of the film and drying time are determined on plates of electrical cold-rolled steel (GOST 802-58) 100 x 100 mm in dimension and 0.35-0.5 mm thick. The varnish is applied by immersion in a single layer and dried 30 min at 18-22°C, then for 12 min at 200-210°C. The hardness of the film is determined on glass plates. The varnish is applied per GOST 13526-68 (part 2.2.2) and dried 30 min at 18-22°C, then for 1 h at 200-210°C. Film thickness of the varnish after drying must be 20-25 μm.

Oil resistance and electrical strength are determined on plates of cold-rolled sheet copper (GOST 4495-50) measuring 100 x 100 mm and 0.4-0.6 mm thick. The varnish is applied by immersion in two layers per GOST 13526-68 (part 2.2.2). The first and second layers of varnish prior to drying in a thermostat are held at 18-22°C for 30 min. Then the coating is dried: the first layer for 1 h. Thickness of the dried two-layer coating should be 45-55 μm.

2.4. The color and external appearance of the varnish are determined per GOST 13526-68 (part 1.1).

2.5. The external appearance of the varnish film is determined usually in natural diffused light. The specimen is prepared according to 2.3.

2.6. The viscosity of the varnish is determined per GOST 8420-57 by the VZ-4 viscosimeter.

2.7. Concentration of the dry residue is determined per GOST 6989-54 (sections IV and V) in a thermostat at 150°.

2.8. Determination of drying time.

The specimen, prepared according to 2.3 and cooled to 18-22°C, is pressed with the fingers. The varnish film should not come off.

2.9. The hardness of the film tested with the pendulum device is determined per GOST 5233-67. the specimen is prepared according to 2.3.

2.10. Oil resistance of the film is determined according to GOST 13526-68 (2.3.13). Surface lines are permitted in this case. The specimen is prepared according to 2.3.

2.11. The electrical strength of the film is determined per GOST 13526-68 (2.3.14) and GOST 6433-65. The specimen is prepared according to 2.3.

3. PACKING, MARKING, TRANSPORTATION, AND STORAGE

3.1. Packing, marking, transportation, and storage of varnish KF-965 are according to GOST 9980-62.

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